

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

UNITED STATES OF AMERICA et al.,

Plaintiffs,

v.

AMERICAN AIRLINES GROUP INC. and
JETBLUE AIRWAYS CORPORATION,

Defendants.

Case No. 1:21-cv-11558-LTS

PLAINTIFFS' RESPONSE TO DEFENDANTS' DAUBERT MOTION AND
MOTION IN LIMINE CONCERNING PLAINTIFFS' EXPERT'S
MERGER SIMULATION MODEL

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INTRODUCTION

Defendants’ motion obscures simple facts and straightforward analyses. Before entering into the Northeast Alliance (“NEA”), American Airlines (“AA”) and JetBlue competed in dozens of origin and destination markets into and out of Boston and New York City. According to JetBlue’s own analysis, the impact of JetBlue’s presence in particular markets was profound, resulting in double-digit percentage decreases in airfares and millions of dollars in corresponding savings for travelers. *See* Ex. A, PX0644 (JetBlue’s December 2017 internal analysis of the JetBlue Effect). This competition created real-life savings of a magnitude that Defendants now attempt to dismiss as “wildly implausible” when analyzing the effect of an agreement that eliminates these competitive benefits.

The NEA has eliminated any meaningful competition between AA and JetBlue in nonstop overlap markets from the NEA airports—Boston Logan International Airport, John F. Kennedy International Airport, LaGuardia Airport, and Newark Liberty International Airport (the “NEA Airports”). AA and JetBlue plan their networks and share revenues at the NEA Airports as if they were one airline. According to Defendants’ own description of the NEA’s key provisions, capacity coordination allows them to “engage in network planning as if their Northeast assets were in a single airline,” and revenue sharing makes “each carrier indifferent as to which carrier an incremental NEA passenger flies.” Ex. B, PX0456 (letter from AA’s counsel to the Department of Justice).

Professor Miller’s economic analysis is rooted in these simple facts. He then develops that analysis using a standard analytical framework that is generally accepted by antitrust economists and courts to measure how the incentives of market participants change when the structure of the market changes, whether through a merger or other agreement between

competitors. Despite Defendants’ suggestion otherwise, this kind of model has been admitted by courts in the context of mergers and non-mergers alike because it provides a “simulation of competitive pressures in a but-for world with different competitors.” *Castro v. Sanofi Pasteur Inc.*, 134 F. Supp. 3d 820, 837 (D.N.J. 2015) (admitting a Bertrand-based simulation model in the context of a non-merger antitrust challenge and noting that this type of model has “been approved for various judicial uses”). Prof. Miller took this standard model and carefully tailored it to account for the unique characteristics of the NEA.

Prof. Miller’s expert opinion far exceeds the requirements for admissibility under Federal Rule of Evidence 702 and *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993). Accordingly, Defendants’ motion should be denied.

BACKGROUND

To determine whether the NEA will likely lead to competitive harm, Professor Nathan Miller, a professor of business strategy and economics at Georgetown University, examined how the alliance changes AA and JetBlue’s economic incentives. The primary—but by no means only—tool of economic analysis that he used to assess the NEA’s impact on Defendants’ incentives in overlap markets at the NEA Airports was a Bertrand-based simulation model. Simulation models are economic tools based on simple building blocks, including a model of demand (specifying how consumers choose among the available products) and a model of supply (specifying how firms compete). Bertrand models are “known as the ‘workhorse’ model” in merger cases, and courts have approved their use in non-merger contexts as well. *Castro*, 134 F. Supp. 3d at 837.

For a particular analysis, economists “fit” the model based on data collected before the agreement or merger in question such that the model’s calculations of prices and sales levels in

the absence of the agreement replicate what is actually observed in the real world, prior to the agreement, as closely as possible. Then, the agreement or merger being evaluated is “simulated” by telling the model what has changed: full consolidation of two of the firms in the case of a merger, or an alignment of incentives in the case of a profit- or revenue-sharing agreement. The model then determines the new prices and sales levels that would maximize profits when each of the market participants considers the new market structure. By comparing predicted prices to pre-agreement prices, the model captures the impact of the merger or agreement at issue on the changed incentives of the newly combined firms.

Importantly, the price increases generated in simulation models may be realized in ways other than price; firms may increase prices, but they may also reduce quality, or do both. Also important is that while models such as these use real-world data as inputs to generate projected price increases, they do not—and need not—make implausibly precise predictions down to a tenth of a decimal point. As Prof. Miller will explain, such models are useful for analyzing the incentives of the involved companies, and for approximating the likely effects on competition and consumers, and should be prepared and used with this in mind.

LEGAL STANDARD

Federal Rule of Evidence 702, which incorporates the principles set out by the Supreme Court in *Daubert* and *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999), governs the admissibility of expert testimony. “Rule 702 has been interpreted liberally in favor of the admission of expert testimony.” *Levin v. Dalva Bros., Inc.*, 459 F.3d 68, 78 (1st Cir. 2006). As the advisory committee’s notes to Rule 702 make clear, “[T]he rejection of expert testimony is the exception rather than the rule.” Fed. R. Evid. 702 advisory committee’s note. “As long as an expert’s scientific testimony rests upon ‘good grounds, based on what is known,’ it should be

tested by the adversary process—competing expert testimony and active cross-examination—rather than excluded from jurors’ scrutiny for fear that they will not grasp its complexities or satisfactorily weigh its inadequacies.” *Ruiz-Troche v. Pepsi Cola of P.R. Bottling Co.*, 161 F.3d 77, 85 (1st Cir. 1998) (quoting *Daubert*, 509 U.S. at 590). “Notwithstanding the deep dive that courts often take to adequately assess the reliability of expert methodology . . . they must stop short of weighing the evidence, evaluating credibility, or unnecessarily picking sides in a battle between experts.” *Lawes v. CSA Architects & Engineers LLP*, 963 F.3d 72, 98 (1st Cir. 2020).

The “cautious approach” that courts have taken when considering whether to exclude expert testimony under *Daubert* is heightened in a bench trial. *See 58 Swansea Mall Drive, LLC v. Gator Swansea Prop., LLC*, No. CV 15-13538-RGS, 2017 WL 9885338, at *1 (D. Mass. Sept. 20, 2017) (citing *In Re Zurn Pex Plumbing Prods. Liab. Litig.*, 644 F.3d 604, 613 (8th Cir. 2011) (noting that “[t]he main purpose of *Daubert* exclusion is to protect juries from being swayed by dubious scientific testimony,” and that a “less stringent application of *Daubert* in bench trials” is appropriate) and *United States v. Brown*, 415 F.3d 1257, 1268 (11th Cir. 2005) (suggesting that *Daubert* has a relaxed application to bench trials “where the judge is serving as factfinder”)).

ARGUMENT

A. Prof. Miller conducted a detailed economic analysis and concluded that the NEA creates incentives analogous to a merger in overlap markets.

Defendants argue that Prof. Miller’s economic analysis does not “fit” the NEA because, as they assert repeatedly, the NEA is not a merger. Apart from declaring that this conclusion is “obvious,” they erroneously claim that Prof. Miller ignores the NEA’s revenue-sharing agreement—the self-styled “Mutual Growth Incentive Agreement,” or MGIA. *See* Motion at 9–10. Defendants are so focused on this single tree that they miss the surrounding forest. In contrast, Prof. Miller analyzed the NEA in its entirety and tailored his analysis to evaluate the

specific incentives created by the alliance.

First, and most importantly, Defendants myopically focus only on the revenue-sharing formula in the MGIA and do not seriously engage with Prof. Miller's detailed analysis examining the incentives created by the NEA as a whole. In particular, Prof. Miller considered what AA and JetBlue have essentially admitted: that their ability to coordinate capacity decisions on NEA routes allows them to function like a single airline. When they coordinate on capacity decisions, AA and JetBlue are incentivized to maximize their shared joint profit. The MGIA specifies how joint revenue (and therefore joint profit) is split, not the level of joint profit itself.

Second, Defendants fail to acknowledge that standard economic tools can help measure how revenue sharing creates additional incentives to increase prices once the airlines have jointly set their capacity, whether as part of full merger or a partnership like the NEA. Prof. Miller examined whether these anticompetitive incentives to increase prices through coordinated capacity reductions offset any incentives to increase capacity that Defendants claim flow from the MGIA. He found that they do.

Third, Defendants claim that Prof. Miller ignores the particulars of the NEA's revenue-sharing formula. That is not so. As explained below, Defendants seemingly do not correctly understand how Prof. Miller tailored his analysis to the specifics of the NEA.

Fourth, Prof. Miller's use of a Bertrand-based model of competition is appropriate for the airline industry and commonly used in the academic literature. Prof. Miller also analyzed the NEA using Defendants' preferred assumption of Cournot competition—an analysis not mentioned in their motion—and he found that the predicted consumer harm from the alliance only increased. Under either assumption, the NEA is shown to be anticompetitive.

1. Prof. Miller tailored his analysis to the unique features of the NEA by considering Defendants’ ability to coordinate their capacity decisions.

As Prof. Miller explained in his deposition, his analysis “characterizes the incentives that are created by the NEA specifically, not those of a generic merger.” Ex. C, Miller Dep. at 164:17–168:06. The anticompetitive incentives created by the NEA primarily flow from two of its provisions: capacity coordination and revenue sharing. Defendants’ motion (and Defendants’ experts generally) focus almost exclusively on the revenue-sharing aspect of the NEA, as if it were the only provision in their agreement. But the NEA’s capacity coordination is crucially important to how the alliance functions. Defendants routinely ignore it; indeed, their *Daubert* motion does not mention capacity coordination a single time.

Defendants have in the past recognized that the NEA’s capacity coordination is a “core” feature of the NEA. Motion to Dismiss at 27. Section 3.1 of the NEA Agreement requires AA and JetBlue to “endeavor in good faith to optimize their respective, individual network plans . . . after due consultation on all aspects of its network plans” within the NEA. Ex. D, PX001 § 3.1.2.1. As Defendants explained in their Motion to Dismiss, “under [the capacity coordination] process, American and JetBlue teams together develop and propose detailed schedules, equipment assignments, slot and gate assignments and other logistics necessary to offer consumers the optimized network.” Motion to Dismiss at 7. Only after AA and JetBlue jointly plan their schedules do they sell seats on the planes that fill those schedules and share the resulting revenues.

Prof. Miller examined the evidence in the record and reached the unremarkable conclusion that, when given the ability to coordinate their capacities and schedules under the NEA, AA and JetBlue will avoid capacity decisions that reduce their joint profit. Indeed, Prof. Miller relied in part on Defendants’ own internal documents to reach this conclusion. For

example, AA and JetBlue recognized that capacity coordination was intended to “ensure mutual benefit” for the two carriers. Ex. E, PX0286 (AA and JetBlue joint planning memorandum).

JetBlue’s Vice President for the NEA, David Fintzen, advised his team, “[A]s you think about the [NEA] schedule, think about how both sides of the partnership work together and maximize the joint revenue,” and when planning their joint schedules, JetBlue and AA should “see what is [the] best overall [joint venture] solution (as that is what drives the economics).” Ex. F, PX0751.

Thus, according to their own executives—some of whom will testify at trial about these very issues—the NEA’s capacity coordination process operates to achieve the same “mutual benefit” as a merger. Consistent with the documentary record, AA told the Department of Justice shortly after the NEA was announced that, within the alliance, AA and JetBlue would “engage in network planning as if their Northeast assets were in a single airline.” Ex. B, PX0456. If Defendants wish to dispute their own prior statements, they can do so at trial. *See United States ex rel. Bawduniak v. Biogen Idec, Inc.*, No. 1:12-CV-10601-IT, 2022 WL 2662678, at *4 (D. Mass. July 8, 2022) (“[T]o the extent that [the defendant’s] objections constitute disagreement with expert opinions after an expert’s review of the record, such disagreement is more appropriate for cross-examination at trial.”).

Capacity coordination between two competing airlines on a route where they both fly—particularly nonstop overlap routes—creates clear anticompetitive effects, as the two airlines will have an incentive to maximize their joint profits by reducing capacity. Even one of Defendants’ experts acknowledges these basic principles. *See* Ex. G, Carlton dep. at 25–28 (stating that two airlines with the ability to coordinate capacity on a particular route “would have a collective incentive to reduce capacity and drive up fares”). But unlike Defendants, Prof. Miller properly “fit” his analysis to the facts of this case by incorporating both the NEA’s capacity coordination

and its revenue sharing into his analysis. *See Castro*, 134 F. Supp. at 837 (denying motion to exclude expert using Bertrand model in case involving claims under Sections 1 and 2 of the Sherman Act); *Cummings v. Std. Register Co.*, 265 F.3d 56, 65 (1st Cir. 2001) (holding district court properly admitted testimony of economist who offered sufficient explanations for his decision to rely on certain facts); *Packgen v. Berry Plastics Corp.*, 46 F. Sup. 3d 92, 116 (D. Me. 2014) (denying motion to exclude expert where expert demonstrated he had considered relevant facts in his calculations).

2. When combined with capacity coordination, the NEA's revenue sharing incentivizes price increases on nonstop overlap routes.

The logic for how revenue sharing between two horizontal competitors eliminates competition is relatively straightforward. Take the simple hypothetical example of two plumbers that price and operate independently, but share their revenue. If one of them takes in \$100,000, and the other takes in \$150,000, and they split their total earnings such that each ends up with \$125,000, it does not matter which of them any particular customer chooses.¹ There is no incentive for them to compete with each other because neither one benefits if they win a customer from the other.

As Prof. Miller explained in detail in his initial expert report, this basic logic applies to any partnership between firms that allows for “metal neutral” revenue sharing, including the NEA. Ex. H, Miller Report § 4. Just as in the hypothetical described above, under the NEA, AA benefits from an increase in JetBlue's NEA revenue, and vice versa. In that way, the NEA's

¹ Defendants may assert that indifference is established only when profits are shared, while the MGIA provides only for the sharing of revenues. Prof. Miller's simulation models the MGIA as if it were a profit-sharing agreement, but as he explained in his report, a revenue-sharing agreement produces *more* upward pricing pressure than a profit-sharing agreement because the absence of cost-sharing creates anticompetitive incentives to shift customers to the other party. Ex. H, Miller Report ¶ 36 n.41. Therefore, Prof. Miller's assumption of profit sharing, rather than revenue sharing, is conservative.

revenue sharing reinforces the joining of interests created by Defendants’ ability to coordinate capacity. In the words of AA and JetBlue executives, they are “metal neutral” because of the revenue sharing, meaning that they no longer have a reason to compete for incremental passengers. An internal AA pricing document recognized this dynamic when it instructed a part of AA’s revenue management team to “maximize revenue between [AA and JetBlue] by evaluating combined market share for high level health” and “within the NEA, we are metal neutral with [JetBlue] since it is a 100% revenue share.” Ex. I, PX0334 at 21. Similarly, Defendants have explained that the MGIA’s revenue sharing makes “each carrier indifferent as to which carrier an incremental NEA passenger flies.” Ex. J, PX0450 at 3 (Defendants’ presentation to the Department of Justice titled “Overview of MGIA”)

Anyone reading Prof. Miller’s analysis of the MGIA would be confused by Defendants’ contention that Prof. Miller “ignore[s] the NEA parties’ revenue-sharing agreement.” Motion at 10. That is clearly false. In fact, Prof. Miller recognized that, in addition to the anticompetitive incentives created by revenue sharing generally, the revenue-sharing formula in the MGIA could—if it were the only component of the NEA—create some incentives for AA and JetBlue to expand capacity on certain routes. Ex. H, Miller Report ¶ 46. However, while Defendants would prefer that the analysis end there, Prof. Miller goes on to evaluate how the ability to coordinate capacity impacts any such growth incentives created by the MGIA. As Prof. Miller explains, because AA and JetBlue can coordinate their capacities and schedules in overlap markets within the NEA, there is no economic reason why Defendants would choose to *lose money* by expanding at each other’s expense.² Ex. H, Miller Report § 4.2. Rather, they will

² Defendants seek to cast this conclusion as an impermissible opinion about American and JetBlue’s “intent or state of mind,” citing *United States ex rel. Bawduniak v. Biogen Idec, Inc.*, No. 1:12-CV-10601-IT, 2022 WL 2662678, at *2 (D. Mass. July 8, 2022). That case involved an

optimize their capacity through coordination, and then share the resulting revenues.

As the foregoing description of Prof. Miller’s analysis makes clear—and as corroborated by Defendants’ own words—AA and JetBlue do not compete in any meaningful way in origin and destination markets involving nonstop service at the NEA Airports. They jointly set their capacity and schedules for nonstop routes, and they are “neutral” as to which one flies additional passengers. Under these circumstances, the Department of Justice and Federal Trade Commission’s *Collaboration Guidelines* advise that a partnership between competitors should be treated as a merger and analyzed pursuant to the *Horizontal Merger Guidelines*, which discuss the “upward pricing pressure” and simulation models that Prof. Miller employs here.³

3. Defendants misunderstand how Prof. Miller has tailored his analysis to the specifics of the NEA.

Defendants focus significant attention on the first half of a single footnote in Prof. Miller’s report, in which he explains how he incorporates the MGIA’s revenue-sharing formula into his analysis. Ex. H, Miller Report ¶ 56 n.68. Defendants misinterpret this footnote by reading it in isolation, just as they focus only on the revenue-sharing provisions of the NEA and fail to acknowledge the NEA’s capacity coordination provisions.

expert who sought to opine about the intent behind a pharmaceutical company’s historical activities, which the court found was properly within the remit of the jury. In antitrust cases, in contrast, where the central questions relate to how firms behave now or in the future, expert economists commonly testify based on their expertise about the way that firms are likely to respond to their economic incentives. *See, e.g., Viamedia, Inc. v. Comcast Corp.*, 951 F.3d 429, 484 (7th Cir. 2020); *Sitts v. Dairy Farmers of Am., Inc.*, No. 2:16-cv-00287, 2020 U.S. Dist. LEXIS 111144, *22 (D. Vt. June 24, 2020). What Prof. Miller does here is no different than what antitrust economists do in virtually every case in which they testify.

³ *See* U.S. Dep’t of Justice and Fed. Trade Comm’n, *Antitrust Guidelines for Collaborations Among Competitors* (2000) § 1.3. These tools are widely accepted methods for assessing competitive effects. *See, e.g.,* Ex. L, Gregory J. Werden and Luke M. Froeb, “Unilateral Competitive Effects of Horizontal Mergers,” in *Handbook of Antitrust Economics*, Paolo Buccirossi (ed.) (Cambridge, MA: The MIT Press, 2008).

First, as explained above, the fact that AA and JetBlue coordinate their capacity decisions within the NEA drives much of the alliance's anticompetitive effects. The formula for calculating how NEA revenues are divided determines how much money one Defendant owes the other at the end of a set period; whatever the agreed upon split, coordinated capacity decisions will be made with an eye toward joint profit.

Second, the specific split of revenues only matters to the extent that Defendants operate itineraries that are fully or partially *outside* the scope of the NEA. The assumed split of revenues makes no difference for nonstop overlap itineraries (flights to or from Boston or New York where AA and JetBlue both offer nonstop service) because all of the revenues for both airlines fall within the scope of the NEA. Prof. Miller explains that because nonstop overlap business is fully within the scope of the NEA, anticompetitive effects are nearly identical to those of a full merger, and so the percentages of revenue split are irrelevant. Ex. K, Declaration of Nathan H. Miller ¶¶ 10–11; *see also* Ex. H, Miller Report ¶¶ 176–178 and Appendix §12.1.3.

Markets involving overlapping nonstop service from an NEA Airport account for approximately 92% of the estimated anticompetitive effects in domestic overlaps from the NEA.⁴ Ex. H, Miller Report Exhibit 24. The remaining estimated harm (8%) predicted by the simulation model involves markets where Defendants offer service that is fully or partially outside the scope of the NEA. Prof. Miller's analysis accounts for the fact that only some of the revenues from these markets will be shared.

⁴ In overlap markets involving nonstop service, some American and JetBlue passengers fly on connecting itineraries. For this subset of passengers, Prof. Miller appropriately accounts for the fact that part of the revenues for their itinerary is outside the scope of the NEA. Ex. H, Miller Report ¶ 182. However, because nonstop passengers account for the vast majority of American and JetBlue passengers in these markets, this adjustment for markets involving nonstop overlaps has a very small impact on the predicted harm.

Thus, not only does this footnote in Prof. Miller's report provide an example of Prof. Miller specifically tailoring his analysis to fit the details of the NEA, it has no bearing on the markets that account for most of the harm that he predicts. *See* Ex. C, Miller Dep. at 195 ("I've assumed something close to joint profit maximization in the pricing stage, but it's not exact because it's respecting the specific terms of the MGIA and how revenues are shared.").

4. Prof. Miller's use of a Bertrand-based simulation model was appropriate.

Defendants assert that Prof. Miller should have used a simulation based on a Cournot model of competition. The Bertrand model that Prof. Miller used is a standard model of competition that economists use when firms set prices to compete for consumers who view their products as less than perfectly identical. It generates the prediction that when firms raise price, sales are lower. A Cournot model is commonly used when all firms produce an identical product—consumers see no brand or product quality differences across firms—and each chooses a quantity of product to deliver to the market. Defendants claim that the airline industry is a “textbook example” of Cournot competition, but they are not correct. Although the airline industry exhibits some characteristics consistent with Cournot competition, each airline's price is determined in part by choices that individual airlines make, including the complex determination of how many tickets to sell for particular classes at particular points in time, as well as the prices charged by its competitors. These choices are better reflected in the Bertrand model that Prof. Miller uses.⁵

⁵ Bertrand competition is commonly used in the academic literature to examine airline competition. *See* Ex. M, Craig Peters, “Evaluating the Performance of Merger Simulation: Evidence from the U.S. Airline Industry,” *The Journal of Law & Economics*, 49(2), 2006, pp. 627–649; Ex. N, Philip Gayle and Chi-Yin Wu, “On the Extent to which the Presence of Intermediate-stop(s) Air Travel Products Influences the Pricing of Nonstop Air Travel Products,” *Review of Network Economics*, 13(3), 2014, pp. 355–395; Ex. O, Sophia Li et al., “Repositioning and Market Power After Airline Mergers,” *The RAND Journal of Economics*, 53(1), 2022, pp.

The best support in the literature that Defendants could muster is a selectively quoted phrase from an article by Dr. Craig Peters in the *Journal of Law & Economics*, stating that simulation models like Prof. Miller’s “do not generally provide an accurate forecast.” But, as Prof. Miller explained during his deposition, the import of this statement is that simulation models tend to *understate* the price effects from airline mergers because, according to Dr. Peters, “[w]hile merger simulation can be useful to understand the effect of a merger on unilateral pricing incentives,” which is how Prof. Miller uses it, “such methods are likely to yield unsatisfactory predictions of a merger’s overall effect” because they do not account for other changes in firm conduct that tend to increase prices, such as an increase in coordination. Ex. C, Miller Dep. at 124–125. Prof. Miller describes exactly these other likely effects in his initial report immediately following his discussion of the simulation model. Ex. H, Miller Report § 7.

As Prof. Miller further explained in his reply report, he verified his original conclusions by modeling the NEA assuming Cournot competition, and he found that the predicted harm was even larger in the overlaps involving the NEA Airports than his Bertrand-based model. Ex. Q, Miller Reply Report ¶ 43 n.46. A Bertrand-based model remains the appropriate framework for the reasons described above, but regardless of the assumption that one uses, the NEA generates significant consumer harm.

In any event, these are the kinds of issues that are properly the subject of trial testimony and cross-examination. “It would be an unacceptable drain on, and a misuse of, judicial resources to allow a *Daubert* motion to become a mini-trial on the very facts the expert is intended to help the [factfinder] later resolve. Instead, disputes over the facts on which an expert

166–199; Ex. P, Steven Berry and Panle Jia, “Tracing the Woes: An Empirical Analysis of the Airline Industry,” *American Economic Journal: Microeconomics*, 2(3), 2010, pp. 1-43.

bases his opinions go to the weight of the testimony, not its admissibility.” *United States ex rel. Dyer v. Raytheon Co.*, No. CIV.A. 08-10341-DPW, 2013 WL 5348571, at *8–9 (D. Mass. Sept. 23, 2013) (citing *Crowe v. Marchand*, 506 F.3d 13, 18 (1st Cir. 2007)).

B. Prof. Miller’s simulation model is reliable.

Defendants have put forward three criticisms of Prof. Miller’s simulation model in an attempt to undermine the model’s reliability. None of these criticisms casts doubt on Prof. Miller’s conclusions. Regardless, any debate over these issues is properly the subject of opposing expert testimony and cross-examination. *See Lawes*, 963 F.3d at 99.

1. Prof. Miller’s predicted price effects are comparable to JetBlue’s analysis of its own effect on fares.

Defendants claim that the estimated price effects from Prof. Miller’s simulation model cannot be squared with “measured price effects of prior mergers.” Motion at 15. But Defendants have chosen entirely the wrong comparison. As an initial matter, the literature about prior mergers on which Defendants rely relates to mergers of two legacy hub-and-spoke airlines, several of which involved divestitures or other remedies. In contrast, the NEA involves the combination of a legacy airline with a highly disruptive low-cost carrier that touts itself as having a more significant effect on prices than other low- or ultra-low-cost carriers—what it calls the “JetBlue Effect.” To test the reliability of his model, Prof. Miller examined the most relevant available data: the past effects of JetBlue exit and entry.⁶

Defendants do not completely ignore Prof. Miller’s comparison of his model’s predictions with this analysis of the JetBlue Effect, but they erroneously assert that he used “cherry picked examples by Plaintiffs.” As Table 20 in Prof. Miller’s initial report plainly

⁶ *See also* Ex. Q, Miller Reply Report ¶ 134 (explaining that examples of the JetBlue Effect demonstrate that the range of price effects predicted by his simulation model is within the range of historical experience).

reflects, his examination included the average JetBlue Effect as measured by the Defendants' experts during the government's investigation. The Defendants found an average 20% price decrease from JetBlue entry. As Prof. Miller explained in his report, other academic studies, also frequently cited by JetBlue in various contexts, similarly have found roughly 20% price decreases resulting from JetBlue entry.⁷ Moreover, one of Defendants' experts, Dr. Lee, submits analyses of the JetBlue Effect in his report that further support an average effect in the range of 20%.⁸ A 20% average price decrease translates arithmetically to a 25% price increase if JetBlue were eliminated as a competitor—a roughly analogous scenario to the NEA. A 25% average price increase associated with JetBlue exit is well above the average 16.7% increase predicted by Prof. Miller's model for NEA nonstop overlaps and in line with the average increase of 28.7% predicted by the model for Boston nonstop overlaps.⁹ Ex. Q, Miller Reply Report ¶ 131.

These systematic analyses supplied by Defendants' experts were clearly not “cherry-picked by Plaintiffs,” nor were the specific market examples that Prof. Miller highlighted in his report. Rather, JetBlue has repeatedly highlighted these examples in regulatory filings and public

⁷ Ex. H, Miller Report ¶ 202. *See, e.g.*, Michael D. Wittman and William S. Swelbar, “Evolving Trends of U.S. Domestic Airfares: The Impacts of Competition, Consolidation and Low-Cost Carriers,” MIT Small Community Air Service White Paper No. 3, Report No. ICA-2013-07, August 2013 pp. 4, 19, available at dspace.mit.edu/handle/1721.1/79878 (“Wittman/Swelbar Study”); John Kwoka, Kevin Hearle and Phillipe Alepin, “From the Fringe to the Forefront: Low Cost Carriers and Airline Price Determination,” *Review of Industrial Organization*, 48(3), 2016, pp. 247-268 at p. 264; Jan Bruekner, Darin Lee, and Ethan Signer, “Airline Competition and Domestic U.S. Airfares: A Comprehensive Reappraisal,” *Economics of Transportation*, 2 (1), 2013, pp. 1-17.

⁸ Ex. R, Lee Report ¶ 26, Exhibit 6.

⁹ In a footnote, Defendants incorrectly suggest that Prof. Miller's assessment of the JetBlue Effect is irrelevant to his simulation model results. Motion at 21 n.8. As discussed above, Prof. Miller's simulation is examining the effects of the NEA on JetBlue's incentives in markets where it competes with American. JetBlue's incentives to produce a JetBlue Effect is precisely what is undermined by the NEA in the overlap markets. Ex. Q, Miller Reply Report ¶ 129 n.140.

statements. as seen, for example, by a JetBlue submission to the Department of Transportation in 2014 that highlighted the benefit of JetBlue's entry on the route from Boston to Washington-Reagan National (DCA) as resulting in a 28% reduction in fares, Ex. T, PX0686 at 3, which would reflect a 39% increase if that reduction were reversed; and a 2017 presentation reflecting that JetBlue entry on the route from Boston to LaGuardia resulted in a 35% price decrease, Ex. AA, PX0562 at -687, which would reflect a 54% increase if reversed. These price changes are well within the range of price increases estimated by Prof. Miller's simulation model of 54.7% and 12.3%, respectively, for Boston-DCA and Boston-JFK/LaGuardia. *See also* Ex. S, PX0725 at -770 (identifying effects of JetBlue entry in JFK-LAX, SJF-SFO and BOS-SFO).

Defendants further fail to acknowledge that Prof. Miller undertook two additional economic analyses that corroborate his simulation results. First, Prof. Miller studied the effect of legacy airlines on fares, including in markets where a low-cost carrier like JetBlue is also present. Ex. H, Miller Report ¶¶ 211–216; Ex. Q, Miller Reply Report ¶¶ 168–180. Second, Prof. Miller conducted a study that examined the effect on prices at JFK and LaGuardia airports during a period in 2019 when AA reduced its flying as a result of the grounding of the 737 MAX aircraft. Ex. H, Miller Report ¶¶ 217–222. Both analyses showed effects on prices in the same range as those predicted by Prof. Miller's simulation model.

Neither the legacy fare analysis nor the 737 MAX grounding analysis suffers from the significant methodological problems inherent in the academic literature studying prior legacy airline mergers that Defendants cite. Ex. Q, Miller Reply Report ¶ 177 (explaining why his study of legacy presence avoids the endogeneity challenge found in other studies). As Prof. Miller and Prof. Town explain in their reports, the merger retrospective studies suffer from significant methodological problems, including the difficulty of properly accounting for divestitures that

were required for some of them and multiple issues with the identification of valid control and treatment groups. *See* Ex. V, Town Reply Report ¶¶ 35–114; Ex. Q, Miller Reply Report ¶¶ 161–164; Ex. C, Miller Dep. 108:13–109:8.

As Prof. Miller explained in his reply report, his prior research shows that conclusions from airline merger retrospectives “can be sensitive to, and even reversed by, using a different set of control markets.” Ex. Q, Miller Reply Report ¶ 164; *see also* Ex. W, Aditi Mehta and Nathan H. Miller, “Choosing the Appropriate Control Group in Merger Evaluation,” *More Pros and Cons of Merger Control* (Konkurrensverket; Swedish Competition Authority, 2012). Recognizing the many problems with the merger retrospective studies, Prof. Miller explained that he determined that such studies would not provide useful information about the competitive effects of the NEA. Ex. C, Miller Dep. at 101:24-102:17

2. Defendants’ suggestion that the NEA can be evaluated simply by comparing current fares to 2019 fares is meritless.

Defendants’ argument that Prof. Miller’s analysis is unreliable because his predictions do not match fare changes between 2019 and 2021 merits little attention. Such a simplistic comparison is not a useful benchmark because it does not isolate the impact of the NEA. Nor does the comparison that Defendants propose account for any other factors that affected airline prices between 2019 and 2021. This includes most obviously the COVID-19 pandemic, which Defendants’ expert Dr. Lee observes “has had a more severe impact on airline demand than all previous exogenous demand shocks in aviation history combined.” Ex. R, Lee Report ¶ 60.

The comparison exercise in Defendants’ motion is precisely the sort of “before-and-after examination” that their experts have cautioned against. In an article that attempted to evaluate the impact of prior airline mergers on fares, two of Defendants’ other experts, Dr. Carlton and Dr. Israel, state: “[F]ares are affected by many economic factors . . . and those factors may be

changing over time. Because of this, a simple before-and-after examination of nominal fares on the routes affected by the merger risks attributing to the merger trends in fares that may have some other causes.” Ex. U, Carlton et al., Are Legacy Airline Mergers Pro- or Anti-Competitive? Evidence From Recent U.S. Airline Mergers, 62 INT’L J. INDUS. ORG. 58, 66 (2019).¹⁰

Furthermore, as Prof. Miller explains, AA and JetBlue are temporarily incentivized not to act on the anticompetitive incentives created by the NEA because of the scrutiny of government investigations and litigation. Ex. Q, Miller Reply Report ¶ 15; *see also* Ex. Y, Gregory J. Werden, “Inconvenient truths on merger retrospective studies,” *Journal of Antitrust Enforcement*, 3(2), 2015, at 295 (“When the actual effects of a consummated merger cannot be observed reliably, because the merged firm was under scrutiny and could have avoided actions that would have undermined its litigation position, studying the period between consummation and challenge is pointless.”).

3. Estimates of negative marginal costs do not undermine the reliability of Prof. Miller’s model.

Defendants’ final argument for why Prof. Miller’s simulation model is not reliable again misunderstands the significance of a technical aspect of Prof. Miller’s analysis. Marginal costs, Defendants say, “play a critical role in any merger simulation,” and some of the implied marginal costs in Prof. Miller’s analysis are negative. Motion at 19. However, as Prof. Miller explained in his reply report, the “key determinant” of upward pricing pressure in his model is not marginal costs, but rather “markups,” or price minus cost, and markups are always positive. Ex. Q, Miller Reply Report ¶ 137; Ex. K, Miller Decl ¶ 12.

Prof. Miller’s model uses pre-NEA passenger quantities, prices, and other product

¹⁰ Even in this case, Dr. Carlton admits, as he must, that “[c]hanges in actual fares between 2019 and 2021 reflect the effect of the NEA, as well as changes in economic conditions, including the effects of the COVID-19 pandemic.” Ex. X, Carlton Report ¶ 57 n.67.

attributes to estimate demand, and then calculates markups that are consistent with the principle that airlines seek to maximize their profits. The markups are then used to simulate how much AA and JetBlue would change their prices with the NEA in place. With prices known and markups calculated by the model, one can back out the “implied” marginal costs by subtracting markups from observed prices. If an item of real-world revenue is not included in the available data, the model will “imply” marginal costs that are lower by the amount of the omitted revenue, but the markup—and therefore the model’s results—will not change.

For example, in a hypothetical scenario where the true marginal cost is \$25, if a customer purchases a ticket for \$300 and pays \$50 to check a suitcase, the markup is \$325. ($\$300 + \$50 - \$25 = \325 .) The markup is \$325 whether the \$50 bag fee is treated as an item of revenue or as a cost offset. If the bag fee is treated as a cost offset, one would observe a negative marginal cost of -\$25. The difference is simply a matter of accounting. There is nothing inherently suspect about negative implied marginal costs, particularly where, as here, significant sources of revenue are not included in the best available pricing data.

The measure of price that Prof. Miller uses comes from the Department of Transportation “DB1B” ticketing data, which Defendants agree is “a standard source of fare data in the airline industry.” Motion at 4. DB1B data typically includes only the base fare of a ticket, and does not include any indirect profit opportunities created when a passenger buys a ticket (e.g., ancillary fees like baggage fees, flight change fees, and charges for Wi-Fi, food, and drink) or future profits from establishing customer loyalty. Ex. H, Miller Report ¶ 247. Ancillary fees alone are significant sources of revenue for airlines. *See* Ex. Q, Miller Reply Report ¶ 145.

Prof. Miller calculated the effect of including just some of these omitted revenues on his model’s implied marginal costs, and he found that fewer than 7% of AA’s NEA nonstop overlap

itineraries, and fewer than 11% of JetBlue's, have negative marginal costs after accounting for some ancillary fees based on data from the Bureau of Transportation Statistics ("BTS"). Ex. Q, Miller Reply Report ¶¶ 144–147. Additional revenues, like seat fees, are still omitted from the model's estimate of price because they are not included in the BTS ancillary fee data, suggesting that the number of itineraries with negative marginal costs is even lower. Ex. Q, Miller Reply Report ¶ 145 n.162.

Furthermore, the model's marginal cost estimates represent the "full net economic cost" of transporting an additional passenger on a particular flight, and thus include both familiar items like fuel and staff, but also opportunity costs, such as the possibility of deploying the airplane on another route. Given these features of the model, it is neither surprising nor a modeling error that some itineraries have implied negative marginal costs. But even if one believed that the existence of *any* negative marginal costs is erroneous, small rates of error do not make whole models unreliable. *ResCap Liquidating Tr. v. Home Loan Ctr., Inc. (In re RFC)*, No. 13-cv-3451 (SRN/HB), 2018 U.S. Dist. LEXIS 160008, at *45-49 (D. Minn. Sep. 19, 2018) (disputes about error rate go to weight, rather than admissibility). Indeed, when trying to rationalize a 17% error rate in his own model of market definition, Defendants' expert Dr. Brueckner testified that 17% was a "relatively low" and "acceptable" rate of error. Ex. Z, Bruckner Dep. at 182–183.

CONCLUSION

For the reasons set forth above, the Court should deny Defendants' motion. Prof. Miller's simulation model satisfies the standard set forth in Federal Rule of Evidence 702 and articulated in *Daubert*. Prof. Miller carefully tailored his economic analysis to evaluate the NEA as a whole, and the model's results are comparable to the effects of real-world competition from JetBlue. Prof. Miller should be permitted to testify about his simulation model.

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